REMARKS

I. STATUS OF CLAIMS

Reconsideration of the application in view of the amendments above and/or in view of these Remarks is respectfully requested.

Previously, claims 1-102 were pending. By this amendment, claims 12-24, 28, 33-59, 77, 87, and 101 are cancelled without prejudice or disclaimer, not for reasons related to patentability but merely to place the application in better form for allowance; and Applicant reserves the right to pursue the subject matter of these cancelled claims in one or more timely filed continuation applications.

By this response, claims 1-3, 5, 6, 10, 11, 25-27, 31, 32, 60-71, 73-76, 78-86, 88-97, 100 and 102 are amended. In particular, independent claims 1, 25, 60, 78, 86 and 94 are amended as follows:

1. A method, comprising:

receiving at least one digital image data input stream from a video camera, said digital image data input stream containing digital image information;

creating at least two digital image data streams from said at least one digital image data input stream, each of said at least two digital image data streams comprising at least a portion of said digital image information;

converting said at least two digital image data streams into at least two respective output image streams; and

providing said at least two respective output image streams for transmission together without image compression across a video transmission interface *that has insufficient transmission capacity to transmit said at least one digital image data input stream without image compression.*

25. A method, comprising:

receiving a digital image data from a video camera;

processing said digital image data in a first processing operation to create first processed image data;

processing said digital image data in a second processing operation to create second processed image data; and

providing said first and second processed image data for communication together without image compression across a video transmission interface that has insufficient transmission capacity to transmit said digital image data without image compression;

wherein at least one of:

said first processed image data has an image resolution that is different from an image resolution of said second processed image data, or

said first processed image data is provided for communication across said video transmission interface at an image frame rate that is different from an image frame rate at which said second processed image data is provided for communication from said video camera across said video transmission interface, or

said first processed image data comprises a different portion of said digital image data than said second processed image data, or

a combination thereof.

60. Multiple stream image creation circuitry configured to receive at least one digital image data input stream containing digital information, said multiple stream image creation circuitry comprising multiple stream image processing circuitry configured to:

create at least two digital image data streams from said at least one digital data input stream, each of said at least two digital image data streams comprising at least a portion of said digital image information;

convert said at least two digital image data streams into at least two respective output image streams; and

provide said at least two respective output image streams for transmission together without image compression from a video camera across a video transmission interface *that has insufficient transmission capacity to transmit said digital image data input stream without image compression.*

78. A video camera, comprising:

multiple stream image creation circuitry; and

multiple stream image processing circuitry, said multiple stream image processing circuitry comprising

at least one window circuitry component configured to extract a selected portion of an original higher resolution image frame to form a lower resolution windowed partial image,

at least one image scaler circuitry component configured to scale the lower resolution windowed partial image,

at least one image deconstruction circuit component configured to segment an original image frame into two or more segmented higher resolution frames or tiled higher resolution images,

at least one alignment data circuitry component configured to insert at least one of tile identification information or horizontal alignment information or vertical alignment information into unused lines of said segmented higher resolution frames or tiled higher resolution images, and

at least one image mux circuitry component configured to select either or both of said scaled lower resolution frames from said image scaler circuitry component or said higher resolution tile images from said alignment data circuitry component for transmission without image compression across a video transmission interface *that has insufficient transmission capacity to transmit a digital image data input stream without image compression.*

86. An image processing system, comprising:

a video camera including multiple image creation circuitry; and

a digital video recorder including multiple image receiving circuitry; wherein said video camera is coupled to said digital video recorder by a video transmission interface *that has insufficient transmission capacity to transmit a digital image data input stream without image compression;*

wherein said multiple image creation circuitry comprises multiple image processing circuitry that comprises

at least one window circuitry component configured to extract a selected portion of an original higher resolution image frame to form a lower resolution windowed partial image,

at least one image scaler circuitry component configured to scale the lower resolution windowed partial image,

at least one image deconstruction circuit component configured to segment an original image frame into two or more segmented higher resolution frames or tiled higher resolution images,

at least one alignment data circuitry component configured to insert at least one of tile identification information or horizontal alignment information or vertical alignment information into unused lines of said segmented higher resolution frames or tiled higher resolution images, and

at least one image mux circuitry component configured to select either or both of said scaled lower resolution frames from said image scaler circuitry component or said higher resolution tile images from said alignment data circuitry component for transmission without image compression across said video transmission interface from said video camera to said digital video recorder.

94. A system for processing digital image data, comprising image creation circuitry configured to:

process said digital image data in a first processing operation to create first processed image data;

process said digital image data in a second processing operation to create second processed image data; and

provide said first and second processed image data for communication together without image compression from a video camera across a video transmission interface to a device, *wherein said video transmission interface has insufficient transmission capacity to transmit the digital image data without image compression;*

wherein at least one of:

said first processed image data has an image resolution that is different from an image resolution of said second processed image data, or

said first processed image data being provided for communication across said interface at an image frame rate that is different from an image frame rate at which said second processed image data is provided for communication across said video transmission interface, or

said first processed image data comprises a different portion of said digital image data than said second processed image data, or

a combination thereof.

Various of the remaining pending dependent claims are amended for clarity and/or antecedent basis. Upon entry of this amendment, claims 1-11, 25-27, 30-32, 60-76, 78-86, 88-100, and 102 will remain pending and are believed to be in condition for allowance.

II. CLAIM REJECTIONS - 35 U.S.C. §101

Claims 1-12 stand rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. Claim 1 is an independent claim. Claims 2-11 depend from claim 1. Claim 12 is cancelled.

This rejection is respectfully traversed on the grounds that independent claim 1 satisfies both *In re Bilski*'s "machine or transformation" test. First, claim 1 recites, in pertinent part, at least a "video camera", which is a type of machine (or apparatus). Secondly, claim 1 recites, not one, but two types of transformation steps, e.g.:

> ...creating at least two digital image data streams from said
> at least one digital image data input stream, each of said at
> least two digital image data streams comprising at least a
> portion of said digital image information;
> converting said at least two digital image data
> streams into at least two respective output image
> streams;...

Only one prong of the *Bilski* test need be satisfied for patentability. In this case, both prongs are satisfied. Applicant therefore respectfully requests that the rejection of claims 1-12 be withdrawn.

III. CLAIM REJECTIONS – 35 U.S.C. § 103

A. Claims 1-12, 25-33, 55-74, 76-82, 84-86, 88-100, and 102 stand rejected under 35 U.S.C. §102(a) as allegedly being obvious in view of USPAN 2003/0048353 to Kenoyer, et al. ("Kenoyer") in view of USPAN 2002/0141732 to Reese, et al. ("Reese").

This rejection is moot with respect to cancelled claims 12, 28, 33, 55-59, and 77. This rejection is also moot in view of the amendments made to independent claims 1, 25, 60, 78, 86, and 94.

Each of the amended independent claims requires uncompressed transmission of multiple output image streams across a video transmission interface *that has insufficient transmission capacity to transmit at least one digital image data input stream without image compression* (emphasis added). This feature was original to dependent claim 2 and thus should require no further search or examination.

The Office Action states that Kenoyer, which provides a system and method for high resolution video conferencing, "is silent as to stream transmission without image compression from a video camera across said one or more transmission interfaces to a digital video recorder ("DVR")". Not only is Kenoyer silent in this regard, but it also expressly discloses the very opposite – namely encoding and compression before transmission. See, Kenoyer, paragraphs [0036] and [0045].

Paragraph 8 of the Office Action, which rejected the features of dependent claim 2, alleges that Reese cures this deficiency, and in particular cites the following passages to support this allegation:

> Kenoyer – fig. 3; fig. 4; figs 6-8, paragraph 0024-0026;
> paragraph 0030, abstract, paragraph 0008-0014; paragraph
> 0031, paragraph 0033-0034; paragraph 0040-0046.
>
> Reese – fig. 1; fig. 2; paragraphs 0016-0018; and
> paragraphs 0024-0026.

Respectfully, careful examination of these cited figures and paragraphs reveals zero (0) instances of the "a video transmission interface that has insufficient transmission capacity to transmit at least one digital image data input stream without image compression" or words to this effect – in combination with the remaining features of each of Applicant's amended independent claims 1, 25, 60, 78, 86, and 94. Moreover, paragraph [0011] of Reese discloses:

> Embodiments of the invention eliminate the need for a
> separate Manager, and provide a non –computer dependent
> control station at the site of each DVR, by adapting each
> DVR to control, via an *Ethernet network*, all the other
> video recording devices (DVRs) on the network. Digital
> video and control signals may therefore be transmitted via
> ethernet between the inventive digital video recorder-
> controllers (DVRCs) without a need for any external
> managers, computers and/or special video switches.
> (emphasis added)

What is important to note is that Reese, contrary Applicant's claimed invention, is using unlimited-bandwidth ethernet. For example, Reese states in paragraph [0027]:

It is also to be understood that the network need not be
limited to an 'ethernet' network, but may be of any other
known or future digital network technology *having
sufficient bandwidth* and being otherwise capable of
transmitting the digital video signals and control signals.
(emphasis added)

Moreover, Reese, like Kenoyer, expressly teaches the <u>compression of video signals</u> prior

to transmission to devices such as DVRs and/or display monitors. For example, at

paragraphs [0016] and [0017], Reese states, in pertinent part:

Each DVRC will include j analog video-in connectors
and/or wireless receiving ports for connecting to j analog
video cameras. Additionally, some or all of video cameras
connected to the DVRC may be digital video cameras ...
and an appropriate number of connecters [sic] and digital
ports for connecting k (k is an integer) digital video
cameras will be provided on the DVRC ... *Each DVRC
will have the ability to record (and to digitize and/or
compress) video signals received from each of the plurality
... of video cameras directly or operatively connected to
that DVRC. Additionally, each DVRC can digitize,
compress, encode and transmit the video signals received
from each of the plurality ... of its directly connected video
cameras* ... Each DVRC may be connected to a maximum
number M (M is an integer) of analog or digital video
display monitors 500 .... Through M hardware (video-out)
ports, connectors and cabling provided therefore in any
manner known to persons skilled in the art. (emphasis
added)

Consequently, Reese, like Kenoyer, employs the traditional compression of video signals

prior to transmission.

Moreover, even though Reese's cameras are directly or operatively connected to

DVRCs, each camera appears to provides a single image stream to the DVRC. This

single image stream is then compressed (or de-compressed). For example, paragraph

[0026] of Reese, cited by the Office Action, states, in pertinent part:

...The memory controller 234 transmits the selected video
image information received from the connected cameras

(310 and 310D) *to one or more compression engine(s) 238* which reduces the number of transmitted bytes of the video information by known methods ... The compression engine(s) 238 *may also perform de-compression of compressed video* (e.g., for local display of video)...(emphasis added)

In contrast to the alleged combination of Reese and Kenoyer, Applicant's independent claims are each directed to providing multiple uncompressed image streams from a video camera across a video transmission interface that does not have enough bandwidth to transmit the video camera's digital image data input stream (or digital image data).

As for motivation to combine Kenoyer and Reese, it simply does not exist. The Office Action merely concludes (in hindsight after viewing Applicant's specification and claims):

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Reese with the device of Kenoyer [[to]] allow for user flexibility in viewing and capacity for recording of events. (Office Action, page 4)

Clearly, even if such a motivation to combine does exist, the resultant combination of Kenoyer and Reese cannot disclose or suggest the combination of features of Applicant's independent claims 1, 25, 60, 78, 86, and 94 as currently amended. Accordingly, independent claims 1, 25, 60, 78, 86, and 94 are believed to be allowable over the combination of Kenoyer and Reese. Dependent claims 2-11, 26, 27, 29-32, 61-74, 76, 79-82, 84-85, 88-93, 95-100, and 102 are also allowable, by virtue of the respective dependencies from these allowable independent claims, as well as for their added features. Withdrawal of this rejection and allowance of claims 1-11, 25-27, 29-32, 60-74, 76, 78-82, 84-86, 88-100, and 102 are respectfully requested.

B. Claims 10, 75, 78-82, and 84-92 are rejected under 35 U.S.C. §102(a) as allegedly being unpatentable over Kenoyer in view of Reese in further view of USPN 7,113,654 to Russo ("Russo"). This rejection is moot with regards to cancelled claim 87. This rejection is also moot in view of the amendments made to independent claims 1, 25, 60,

78, 86, and 94 referenced above, since Russo fails to cure the deficiencies of Kenoyer and Reese. Withdrawal of this rejection and allowance of claims 10, 75, 78-82, 84-86, and 88-92 are respectfully requested.

C. Claim 83 is rejected under 35 U.S.C. §102(a) as allegedly being unpatentable over Kenoyer in view of Reese in further view of Russo in further view of USPN 6,323,906 to Kobayashi, et al ("Kobayashi"). This rejection is moot in view of the above-amendment to independent claim 78, since Kobayashi fails to cure the deficiencies of Kenoyer, Reese, and Russo. Withdrawal of this rejection and allowance of claim 83 are respectfully requested.

CONCLUSIONS

For at least the above reasons, the Examiner is respectfully invited to pass the application to allowance and issue, and to contact the undersigned if there are any remaining issues that can be resolved by telephonic communication.

While various distinctions have been noted with respect to the cited references, there may be other limitations in the pending claims that are also distinguishable over the cited references, alone or in combination. Applicant therefore reserves all rights and arguments with respect to all such other limitations and distinctions not expressly noted above. Moreover, to the extent that any claim amendments made above constitute a narrowing of the scope of claimed subject matter, such narrowing should not be construed as admitting the merits of any of the claim rejections. Applicant's failure (if at all) to expressly address above any particular statement or argument by the Examiner should not be construed as an admission or acquiescence that such statement or argument is accurate or proper.

Respectfully submitted,

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